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EXAMINER

RUTTEN, JAMES D

ART UNIT	PAPER NUMBER
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2122

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/552,861

Applicant(s)

SNOW, PAUL ALAN

Examiner

J. Derek Rutten

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,6,9,11-13 and 25-35 is/are pending in the application.
- 4a) Of the above claim(s) 1 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,9,11-13 and 25-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Acknowledgement is made of Applicant's appeal brief filed September 7, 2004, responding to the Advisory Action dated June 25, 2004. Claims 1, 2, 5, 6, 9, 11-13, and 25-35 are pending in the application.

2. Applicant's arguments, see paragraph 5 on page 6 through paragraph 1 of page 7, filed September 7, 2004, with respect to the rejection of claim 1 under House have been fully considered and are persuasive. House does not disclose a second working definition that defines the computing environment itself. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of prior art of record U.S. Patent 6,145,119 to House et al. (hereinafter referred to as "House") in view of prior art of record U.S. Patent 5,361,360 to Ishigami et al. (hereinafter "Ishigami") in view of prior art of record U.S. Patent 6,083,276 to Davidson et al. (hereinafter "Davidson").

3. Applicant's aforementioned appeal brief in view of the amendment dated December 24, 2003 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Arguments

4. Applicant argues on page 5 paragraph 4 that “*House does not teach a plurality of computing environments*”. This argument is not convincing. Applicant’s use of the definition of “environment” as defined by “Microsoft Press Computer Dictionary” appears to suggest that House’s project environment does not include the “hardware and the operating system running on it.” However, review of the abstract of House discloses a data structure for encapsulating a software project and a “**project environment** for developing the application.” This project environment is present on development computer 400 as detailed in House FIG. 4, and as such is representative of a computer environment that inherently comprises hardware and an operating system at least to run VAB-II runtime module 430 otherwise the development environment would be inoperative. House does not simply encapsulate the project, but its associated environment as well. Further evidence is found in column 2 lines 63-67:

The present invention describes a data structure readable by the computer for encapsulating a software project with a project application defined by executable programming logic, and a **project environment** for developing the application.

Also, column 6 lines 1-7:

The APP file 454 contains all of the data and structures that represent a software project in the present invention including: project-related data such as **information on the application for the tier-2 network server 110**, stored procedures (SPs) or **user-defined functions (UDFs) for the tier-3 database server 122**, source code (optionally), event logic controls, forms, and relationships among all of these things.

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5. Applicant argues from the last paragraph of page 5 through paragraph 4 of page 6 that “House does not teach a computing environment that includes a set of first working definitions that define a plurality of applications.” The issue appears to stem from the interpretation of computing environment as House’s “project”. However, the computing environment is more accurately referred to as a “project environment” as explained above. Review of element 454 in FIG. 4 of House shows that one project environment can have a plurality of applications, or “APP files”. As such, the argument is not convincing, as House discloses “a set of first working definitions that define a plurality of applications.”

6. Applicant argues from the last paragraph of page 6 to the first paragraph of page 7 that “House does not teach a computing environment that includes a second working definition that defines the computing environment itself.” This argument is convincing. Applicant argued on page 5 that an environment includes “the configuration of resources available to the user.” House’s “other data section” contains project related data including project environment data, but does not in fact *define* the computing environment as does applicant’s invention.

7. Applicant argues in paragraphs 2-4 on page 7 that “House does not teach a second working definition that defines characteristics that are necessary to construct a valid runtime image of its computing environment.” This argument is not convincing with respect to the language of the claims. Claim 1 recites: ...*definitions that define characteristics of one of said plurality of applications that are **necessary** to construct a **valid runtime image** of said one of said plurality of applications...* House’s abstract discloses: *a second section for storing other*

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*data, including data **required** to restore the project environment.* While House's runtime section 550 indeed contains runtime data, the other data section 552 (referred to as the "second section" in the abstract) contains data that is "required" to restore the environment and provide a *valid* runtime image.

8. Applicant argues in paragraph 5 of page 7 that "House does not teach receiving a request for a computing environment". This argument is not convincing, as it does not clearly point out the patentable novelty that the claims present in view of the state of the art disclosed by the references cited. Further, House discloses requests for a computing environment in column 4 lines 43-45:

The dispatcher 202 then allocates a thread of the VAB-II runtime module 116 to each incoming **request** to run the desired application script 118.

9. Applicant argues on page 7 paragraph 6 through paragraph 2 on page 8 that Jalili does not teach encrypted links that provide support for development, testing, beta testing, and deployment of these plurality of applications. This argument is not convincing. House teaches support of project development of Internet applications (column 2 lines 49-55) using a client and a server (FIG. 1 elements 102, 110, and 122). House does not disclose using encrypted links for that support. Jalili teaches the use of encrypted links to enable secure communications between a client and a server. Motivation to combine is detailed in the Final Action of February 5, 2004.

10. Applicant essentially argues on page 8 paragraph 6 through page 9 paragraph 5 that Ishigami does not teach requesting a computing environment that includes a second working definition that defines characteristics of the requested computing environment. The Applicant continues by suggesting that Ishigami's definition information describes tools and data already stored, and further argues that Ishigami's definition information does not define the definition

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itself. This argument is not convincing. It is noted that the language of the claims (e.g. “a second working definition that defines said each one of said plurality of computing environments”) does not require that the definition should define the definition itself. The second working definition needs to define the computing environments. Ishigami likewise discloses a data structure that defines a computing environment (column 2 lines 35-38).

11. Applicant argues on page 9 paragraph 6 through page 11 paragraph 2 that neither Davidson nor Glaser teaches first and second working definitions. However, those limitations are disclosed by Ishigami, not Davidson or Glaser. Therefore, this argument is moot.

12. Applicant argues on page 10 paragraph 3 – page 11 paragraphs 3-5 that Jalili does not teach encrypted links that provide support for development, testing, beta testing, and deployment. However, Jalili is only relied upon to teach encryption as noted above. Thus this argument is not convincing.

Claim Rejections - 35 USC § 112

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. Claims 31-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

15. Claim 31 recites “The method as recited in claim 31...”. A claim cannot be dependent upon itself. As such, this claim is indefinite. This is likely a typo that should instead read --The

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method as recited in claim 30--. For the purpose of further examination, this claim will be considered as depending from claim 30

16. Claims 32-34 refer to claim 31, but considering the problems with claim 31 cited above, it is not clear whether these claims intend to depend from this claim or if they also should likely refer to claim 30. For the purpose of further examination, these claims will be considered as depending from claim 30.

17. Claim 35 is rejected for being dependent upon a rejected base claim.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 1, 2, 5, 9, 11-13, 25, 26, 28-31, and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over House in view of Ishigami further in view of Davidson.

In regard to claim 1, House discloses:

a storage unit for storing a plurality of working definitions for a plurality of computing environments (see column 3 line 60: "The first tier comprises a client computer having a monitor and one or more data **storage** devices", and Figures 1 and 5A; also column 6 lines 8-10: "The **APP file** 454 encapsulates all of the objects that make up

a project. From a single APP file 454, the project and all of its state can be recovered...”

); and

an interface for receiving requests for one of the plurality of computing environments from and transferring the requested one of the plurality of computing environments to a client over a communications line (see column 4, lines 23-27: “The RDBMS receives **requests** either directly from tier-2 and/or indirectly from tier-2 via the VAB-II runtime module, and then performs the desired database functions”, and Figure

1. Comments: A database inherently transfers the results of a received request, otherwise no information could be retrieved.);

each one of said plurality of computing environments including a set of first working definitions that define a plurality of applications (column 6 lines 22-27: “The Runtime Section 550 contains all of the data needed primarily at “runtime,” including executable programming logic. **Data stored in the Runtime Section 550 is used to quickly and efficiently load information that is used to run an application**”)

said set of first working definitions and said second working definition being included in said plurality of working definitions (column 6 lines 21-22: “The APP file 454 comprises two major sections, a Runtime Section 550 and an Other Data section 552.”);

each one of said set of first working definitions that define characteristics of one of said plurality of applications that are necessary to construct a valid runtime image of said one of said plurality of applications (column 8 lines 11-15: “For example, **any type of computer**, such as a mainframe, minicomputer, or personal computer, or computer

configuration, such as a timesharing mainframe, local area network, or standalone personal computer, could be used with the present invention.”; also column 6 lines 22-27: **“The Runtime Section 550 contains all of the data needed** primarily at “runtime,” including executable programming logic. Data stored in the Runtime Section 550 is used to quickly and efficiently load information that is used to run an application.”),

said characteristics including state, settings, and structures required to build said runtime image of said one of said plurality of applications (Figure 5A; column 6 lines 8-13: “The APP file 454 encapsulates all of the objects that make up a project. From a single APP file 454, the project and **all of its state** can be recovered (state also includes such design time behavior as which form is currently active and where in a module the code editor was last positioned before the project was saved).”; column 6 lines 52-55: “The present invention solves this problem by instead representing information describing **relationships** between objects inside the APP file 454 using Object IDs 560 and Object Relationships 562.”; column 7 lines 8-10: “For example, an Object Type of Form will have in its Object Data Section 558 **properties** of the Form object (such as size, color, etc.).”); *and*

said second working definition that define characteristics of said each one of said plurality of computing environments that are necessary to construct a valid runtime image of said each one of said plurality of computing environments (column 8 lines 11-15 as cited above; column 6 lines 27-30: “The second major section is The Other Data Section 552, which contains **all other project related data**, including project environment data (such as source code, design time properties, other project development

data, etc.).” Also see the abstract: “...and a second section for storing other data, including data **required to restore the project environment.**”),

said characteristics including state, settings, and structures required to build said runtime image of said each one of said plurality of computing environments (as cited above: Figure 5A; column 6 lines 8-13; column 6 lines 52-55; column 7 lines 8-10).

House does not expressly disclose:

Platform independent definitions, or a second working definition that defines said each one of said plurality of computing environments.

However, in an analogous environment, Davidson teaches the use of platform independent definitions (column 6 lines 45-48: “Preferably, the ADF 202 is an **XML-compliant text document that defines a component-based application** using a descriptive attribute grammar”; also column 7 lines 36-38: “Additionally, the elements 306 may contain attributes 310, which correspond to properties of a component 212.”

Comments: XML is a platform independent markup language.).

Also, in an analogous environment, Ishigami teaches a second working definition that defines a computing environment (column 2 lines 35-47: “Information relating to a hardware configuration and software configuration information relating to tools and data already installed is also stored. When the definition information or the information of hardware configuration changed, software information and names of a plurality of sets of tools and data are referred to. Then, matching of tools and data already installed with the definition information and hardware configuration after they have been changed is inspected. Those tools and data which have already been installed to match the definition

information or hardware configuration after the change are automatically updated.”

Comments: Environment configuration information is required to build new tools.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Davidson’s platform independent definitions along with Ishigami’s computing environment definition in House’s encapsulation tool. One of ordinary skill would have been motivated to use Davidson’s platform independent definitions as a way to create a simple, declarative syntax that can be used for a wide variety of data-oriented files that can be understood in any environment (See Davidson column 3 line 65 – column 4 line 2). One would be motivated to use Ishigami’s computing environment definition in order for a development environment to generate its own tools and which also enables each station to refer to information of other stations (See Ishigami column 1 lines 63-68). The combination allows a complete environment to be encapsulated and distributed.

Regarding claim 2, House discloses: *wherein the communication line is the Internet* (column 2 lines 52-55: “...the present invention discloses a method, apparatus, and article of manufacture for providing a programming development environment that supports the development of **Internet** and Intranet applications”).

Regarding claim 5, House discloses: *wherein each one of said set of first working definitions includes source code for one of said plurality of applications defined by said one of said set of first working definitions* (column 2 lines 57-60: “The data structure

allows all elements and associations necessary to build the components of the project, such as the **source**, objects, executables to be contained or described in a single file”).

Regarding claim 9, House discloses: *wherein the communications line is an intranet* (column 2 lines 52-55: “...the present invention discloses a method, apparatus, and article of manufacture for providing a programming development environment that supports the development of Internet and **Intranet** applications”).

Regarding claim 11, House does not expressly disclose receiving an update to a working definition and modifying the definition to reflect the update. However, Ishigami further teaches: *Said interface receiving an update to one of said set of first working definitions; and modifying said one of said set of first working definitions being modified to reflect said update* (column 8 lines 18-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Ishigami’s modification technique in House’s encapsulated environment. One of ordinary skill would have been motivated to automatically reinstall an application if it has been updated.

Regarding claim 12, House does not disclose a change within the system that results in a modified working definition or an updated runtime image. However, Ishigami further discloses

a change occurring within a data processing system (column 2 lines 37-41);

responsive to a determination that the change affects one of said set of first working definitions, the one of said set of first working definitions being modified to reflect the change (Figure 7, step 508; column 8, lines 18-23); and

the runtime image of one of said plurality of applications defined by said one of said set of first working definitions being updated (column 2 lines 44-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Ishigami's technique of updating the definitions and runtime image with House's encapsulated environment. One of ordinary skill would have been motivated to automatically reinstall an application if it has been updated and reflect these changes in a definition that defines the environment.

Regarding claim 13, House does not disclose a change in the environment. However, Ishigami further discloses *wherein the change is an event* (column 7 lines 41-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Ishigami's change event in House's encapsulation environment. One of ordinary skill would have been motivated to encapsulate design properties and state of an application which are represented by events.

Regarding claims 25 and 26, House discloses *a computer program product* (column 5 lines 38-43). All other limitations have been addressed in the above rejections of claims 1 and 5, respectively.

Regarding claims 28, and 29, the above rejection of claim 25 is incorporated. All other limitations have been addressed in the above rejections of claims 11, and 12, respectively.

Regarding claims 30, 31, and 33-35, House discloses *a method for providing automated software development to a client* (column 9 lines 5-35). All other limitations have been addressed in the above rejections of claims 1, 5, and 11-13, respectively.

20. Claims 6, 27, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of House, Ishigami and Davidson as applied to claim 1 above, and further in view of prior art of record U.S. Patent 5,423,042 to Jalili et al. (hereinafter referred to as “Jalili”).

Regarding claim 6, House further discloses support for development, testing, beta testing, and deployment of the plurality of applications (column 2 lines 4-8).

House does not explicitly disclose *wherein encrypted links are sent to the client along with the requested one of the plurality of computing environments*.

However, in an analogous environment, Jalili discloses a system of communication using encrypted links (see column 14, lines 8-13: “Part number 2 can be implemented by associating with each client an encrypted identifier, which the client uses for all transactions with the server. The server then, based on the client's identification and the permissions associated with a function, authorizes or denies the clients requests.”).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use House's application development system with Jalili's

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encryption to protect access to certain objects. The motivation for doing this is that protections or permissions allow or disallow certain clients from making certain requests.

Regarding claims 27 and 32, the above rejections of claims 25 and 30 are respectively incorporated. All other limitations have been addressed in the above rejection of claim 6.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. "CHIME: A Metadata-Based Distributed Software Development Environment" by Stephen E. Dossick and Gail E. Kaiser discloses a development environment based on platform independent definitions of projects.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Derek Rutten whose telephone number is (571) 272-3703. The examiner can normally be reached on M-F 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jdr



JOHN CHAVIS
PATENT EXAMINER
ART UNIT 2124